

## ABSTRACT

The present invention is an improvement in the preparation of liquid hydrocarbons from natural gas/methane, oxygen and/or steam. In particular, the present invention relates to processes for the production of synthesis gas, reducing the oxygen concentration from the synthesis gas, and the production of liquid hydrocarbons using the oxygen reduced synthesis gas as a feedstock. More particularly, the present invention described herein identifies catalyst compositions, apparatus and methods of using such catalysts and apparatus for preparing liquid hydrocarbons via oxygen reduced synthesis gas all in accordance with the present invention.